

CDIAC / Bond Buyer Pre-Conference GASB 43/45 - Actuarial OPEB Valuations

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Milliman

Consultants and Actuaries

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Agenda

- OPEB Valuation Process
- Recent Studies



OPEB Valuation Process



How Valuation Works

- Gather data, plan provisions
- Select Actuarial Assumptions
- Project active and retiree population
 - Turnover, expected retirement age
 - Life expectancy
 - Current employees and retirees only
- Project annual claims costs
 - Current year
 - Trend for medical inflation in future years
- Project expected retiree payments



How Valuation Works

- Discount payments to today's dollars
- Allocate costs to periods of service



Definitions

- Present Value of Benefits
 - Discount expected payments using interest rate to today's dollars
- Actuarial Accrued Liability
 - PVB attributed to past service only
- Normal Cost
 - Portion of PVB attributed to current year of service only
- Actuarial Cost Method
 - Allocates PVB costs to past, present, and future
- Annual Required Contribution
 - Normal Cost, plus
 - Amortization of UAAL up to 30 years



Assumptions

- Make predictions about the future
- Best estimates based on recent data, plan design, actuarial judgment
- Plan sponsor and auditor must accept assumptions used for GASB reporting



Assumptions

- Demographic assumptions
 - Turnover, retirement, mortality, spouse coverage
- Economic Assumptions
 - Discount Rate
 - Based on expected return of assets set aside to pay OPEB benefits
 - Results very sensitive to selection of rate
 - Salary scale



Assumptions – Claims costs

- Claims Costs
 - Account for higher costs for retirees who are older than actives unless premiums are community rated
- Medical Trend or Inflation
 - Short term
 - Long term
 - Consider other OPEB



Actuarial Cost Methods

- **Six allowable cost methods**
- **Can allocate costs as level dollar or level percentage of payroll**
- **Regardless of method selected, the overall costs will be the same, only the pattern of cost accruals will be different**

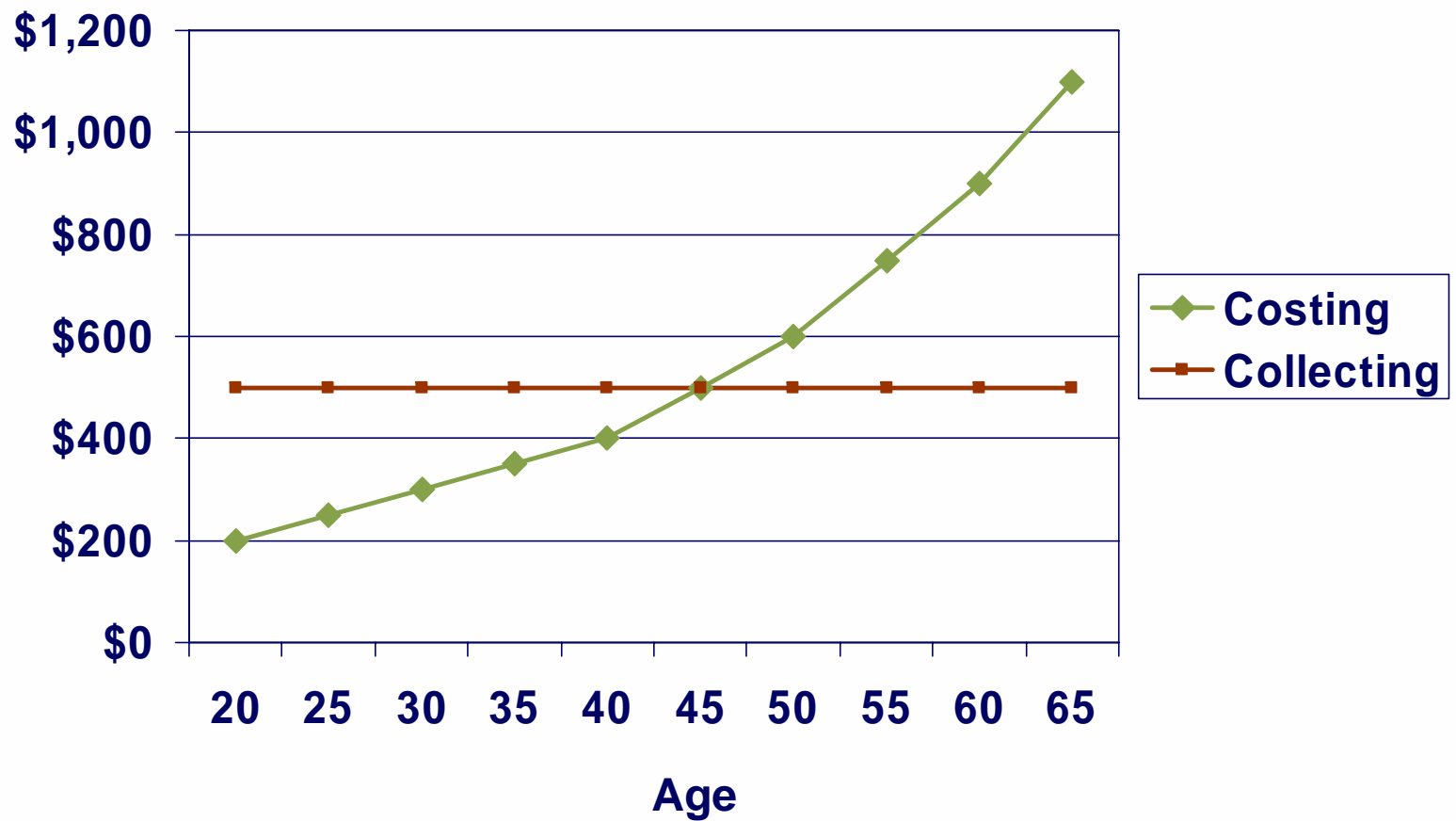


Implicit Rate Subsidy

- Charging pre-Medicare retirees the rate that the employer is charged for the active members
- Collecting an average rate, but true incidence of cost is different
- Retirees cost more than actives because they are older
- Employers are “implicitly” subsidizing the retiree rate
- Part of what employers are paying actives is really for retirees
- GASB wants a proper accounting of this hidden subsidy (implicit rate subsidy)



Implicit Rate Subsidy



Financial Statement Items - Recap

- **Annual OPEB Cost**
 - (Income Statement)
 - = Annual Required Contribution (ARC)
 - Adjustments if employer has net under or over contributions
- **Net OPEB Obligation**
 - (Balance Sheet)
 - Cumulative Total of Annual OPEB Costs less contributions to fund OPEB liabilities
- **Disclosures**
 - Actuarial Liability, Funded Status
 - Plan provisions, assumptions, and methods



Recent Studies



School District

- **Covered population**
 - 1,000 actives, 400 retirees
- **Payroll = \$65 million**
- **Self-Insured Health Plan**
 - Same premium rates for actives, retirees w/o Medicare
- **District Paid Benefits**
 - Pre-65 = \$200/month
 - Post-65 = \$150/month w/ 2% COLA



School District Valuation Results

July 1, 2005

<i>Present Value of Benefits</i>	\$48,760,000
<i>Actuarial Accrued Liability</i>	\$31,580,000
<i>Assets</i>	<u>0</u>
<i>Unfunded AAL</i>	\$31,580,000
<i>Normal Cost</i>	\$1,540,000
<i>Amortization of UAAL (30 years)</i>	<u>1,250,000</u>
<i>Annual Required Contribution</i>	\$2,790,000
<i>ARC as a % of Payroll</i>	4.3%
<i>Annual benefit payments</i>	<u>\$840,000</u>



What Subsidy?

Oh, ... *that* Subsidy!

	<u><i>District Payment</i></u>	<u><i>Premium Subsidy</i></u>	<u><i>Total</i></u>
<i>Present Value of Benefits</i>			
Active employees	\$20,620,000	\$15,510,000	\$36,130,000
Retirees	<u>11,850,000</u>	<u>780,000</u>	<u>12,630,000</u>
Total	\$32,470,000	\$16,290,000	\$48,760,000
<i>Actuarial Accrued Liability</i>			
Active employees	\$11,360,000	\$7,590,000	\$18,950,000
Retirees	<u>11,850,000</u>	<u>780,000</u>	<u>12,630,000</u>
Total	\$23,210,000	\$8,370,000	\$31,580,000
<i>Normal Cost</i>	\$820,000	\$720,000	\$1,540,000
<i>Amort of UAAL</i>	<u>920,000</u>	<u>330,000</u>	<u>1,250,000</u>
ARC	\$1,740,000	\$1,050,000	\$2,790,000
<i>Annual benefit payments</i>	\$840,000	\$230,000	\$1,070,000

Subsidy is over 1/3 of ARC.



To Fund or Not to Fund?

	<i>Discount Rate</i>	
	<i>4%</i>	<i>6%</i>
<i>Present Value of Benefits</i>	\$48,760,000	\$33,780,000
<i>Actuarial Accrued Liability</i>	\$31,580,000	\$22,800,000
<i>Assets</i>	<u>0</u>	<u>0</u>
<i>Unfunded AAL</i>	\$31,580,000	\$22,800,000
<i>Normal Cost</i>	\$1,540,000	\$1,110,000
<i>Amort. of UAAL</i>	<u>1,250,000</u>	<u>1,270,000</u>
<i>ARC</i>	\$2,790,000	\$2,380,000
<i>Annual benefit payments</i>	\$840,000	\$840,000

ARC is 17% lower using 6% discount rate.



City

- **Covered population**
 - 1,000 actives, 600 retirees
- **Payroll = \$80 million**
- **Insured with PERS (PEMHCA)**
 - Same premium rates for actives, retirees w/o Medicare (subsidy exception)
- **City pays entire health premium for lifetime**
 - Spouse coverage as well
 - Age 50 and 5 years of service



City Valuation Results

	<i>Discount Rate</i>	
	<i>4%</i>	<i>7%</i>
<i>Present Value of Benefits</i>	\$252,100,000	\$138,000,000
<i>Actuarial Accrued Liability</i>	\$156,200,000	\$96,000,000
<i>Assets</i>	<u>0</u>	<u>0</u>
<i>Unfunded AAL</i>	\$156,200,000	\$96,000,000
<i>Normal Cost</i>	\$8,600,000	\$4,500,000
<i>Amort. of UAAL (30 years)</i>	<u>5,600,000</u>	<u>5,200,000</u>
<i>ARC</i>	\$14,200,000	\$9,700,000
<i>ARC as a % of Payroll</i>	17.8%	12.1%
<i>Annual benefit payments</i>	\$3,300,000	\$3,300,000

ARC is 3 – 4 times annual benefit payments.



Look how much we've saved!

<i>Initial Assets</i>	<i>Discount Rate = 7%</i>	
	<i>\$0</i>	<i>\$20MM</i>
<i>Present Value of Benefits</i>	\$138,000,000	\$138,000,000
<i>Actuarial Accrued Liability</i>	\$96,000,000	\$96,000,000
<i>Assets</i>	<u>0</u>	<u>20,000,000</u>
<i>Unfunded AAL</i>	\$96,000,000	\$76,000,000
<i>Normal Cost</i>	\$4,500,000	\$4,500,000
<i>Amort. of UAAL (30 years)</i>	<u>5,200,000</u>	<u>4,100,000</u>
<i>ARC</i>	\$9,700,000	\$8,600,000
<i>ARC as a % of Payroll</i>	12.1%	10.8%
<i>Annual benefit payments</i>	\$3,300,000	\$3,300,000

ARC is still 2 – 3 times annual benefit payments.



Annual benefit payments begin to ramp up.

<i>Year</i>	<i>Annual Benefit Payments</i>
1	\$3,300,000
2	3,720,000
3	4,220,000
4	4,720,000
5	5,300,000
10	8,240,000
15	11,130,000
20	14,290,000

Annual payments nearly triple in 10 years.



If we can just control future medical costs...

	+1%	Medical Trend Base	-1%
<i>Present Value of Benefits</i>	\$165,400,000	\$138,000,000	\$116,600,000
<i>Actuarial Accrued Liability</i>	\$111,000,000	\$96,000,000	\$83,700,000
<i>Assets</i>	<u>200,000,000</u>	<u>20,000,000</u>	<u>20,000,000</u>
<i>Unfunded AAL</i>	\$91,000,000	\$76,000,000	\$63,700,000
<i>Normal Cost</i>	\$5,500,000	\$4,500,000	\$3,700,000
<i>Amort. of UAAL (30 years)</i>	<u>4,900,000</u>	<u>4,100,000</u>	<u>3,400,000</u>
<i>ARC</i>	\$10,400,000	\$8,600,000	\$7,100,000
<i>ARC as a % of Payroll</i>	13.0%	10.8%	8.9%
<i>Annual benefit payments</i>	\$3,300,000	\$3,300,000	\$3,300,000

OPEB valuations include medical inflation trend.



County

- **Covered population**
 - 2,800 actives, 1,000 retirees
- **Payroll = \$160 million**
- **Self-Insured PPO , Insured HMO options**
 - Same premium rates for actives, retirees w/o Medicare (implicit subsidy applies)
- **County pays retire only premium**
 - 50%- 100% for 10-20 years service
 - Spouse pays “full” premium



County – Impact of Funding on Balance Sheet

	<i>No Fund 4.5%</i>	<i>Fund 7.0%</i>
ARC	\$25,000,000	\$19,000,000
Less - Age-Adjusted Annual Costs	\$6,000,000	\$6,000,000
Amount to Fully Fund ARC	n/a	\$13,000,000
Net OPEB Obligation (beg of Yr)	\$0	\$0
Net OPEB Obligation (end of Yr)	\$19,000,000	\$0
Budgeted Cash Costs		
County paid retiree premiums	\$5,000,000	\$5,000,000
Trust Payment to Fund ARC	n/a	\$13,000,000
Total Cash Costs	\$5,000,000	\$18,000,000

Difference between age-adjusted annual costs and County paid retiree premiums is due to implicit rate subsidy.



Plan Design - Safety Employees

- 400 actives
- Self-Insured Health Plan
- Current Plan Design
 - Employer pays all retiree health costs
- Alternative Design
 - Retiree health costs capped
 - Employer Contributes X% to individual account for future medical premiums.
 - Account is portable.



Effect of Cap

	<i>No Cap</i>	<i>Cap</i>
<i>Present Value of Benefits</i>	\$110,000,000	\$55,000,000
<i>Actuarial Accrued Liability</i>	\$54,000,000	\$29,000,000
<i>Assets</i>	<u>0</u>	<u>0</u>
<i>Unfunded AAL</i>	\$54,000,000	\$29,000,000
<i>Normal Cost</i>	\$5,000,000	\$2,400,000
<i>Amort. of UAAL</i>	<u>2,100,000</u>	<u>1,200,000</u>
<i>ARC</i>	\$7,100,000	\$3,600,000
<i>ARC as a % of Payroll</i>	23.7%	12.0%

Capping future increases can cut OPEB costs in half.

Trade off is annual contribution costs to individual accounts.



Questions?

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